

Application No. 10/647,247
Attorney Docket No.: 031029
Response Under 37 C.F.R. § 1.111

REMARKS

Claims 1, 3 and 5-19 are pending in the present application.

Notice of References Cited

Applicants note that the Takahashi (U.S. Patent No. 6,537,719) was not included in the Notice of References Cited. Applicants request the addition of Takahashi to the Notice of References Cited.

Claim Rejections - 35 U.S.C. §§ 102 and 103

Claims 1, 3, 5, 6, 8-15, 18 and 19 were rejected under 35 U.S.C. § 102(b) as being anticipated by **Kanda** (EP 1152036); claim 7 was rejected under 35 U.S.C. § 103(a) as being unpatentable over **Kanda** in view of **Suzuki** (U.S. Patent No. 6,043,145); and claims 16 and 17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over **Kanda** in view of **Takahashi** (U.S. Patent No. 6,537,719) and **Tanaka** (U.S. Patent No. 6,555,617).

Favorable reconsideration is requested.

Applicants respectfully submit that Kanda does not disclose:

wherein a maximum opening dimension D_{max} (nm) and a minimum opening dimension D_{min} (nm) of the smoothed resist pattern are within a range of $\pm 5\%$ with respect to a predetermined opening dimension D (nm) of the resist pattern, and

wherein the predetermined opening dimension D (nm) of the resist pattern, and an average opening dimension D_{av} (nm) of the smoothed resist pattern whose wall surfaces have been smoothed satisfy the relation expressed by:

$$D_{av} \text{ (nm)} \geq D \text{ (nm)} \times (90/100).$$

as recited in claim 1.

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Kanda discloses a fine pattern-forming material comprising a water soluble resin composition. Kanda is concerned with reducing the size of a space in resist patterns. (Paragraph 1.) In Table 1, Kanda provides evaluation results of the degree of reduction of size of line and space patterns (AZ 7900) and contact hole patterns (AZ DX3200P). Kanda discloses a reduction in size of 43.6 % and 51.0 %, respectively, for Example 2. (Table 1.) However, “reduction in size of the line and space patterns” does not correspond to an average opening dimension compared to a predetermined opening dimension. The evaluation results also do not correspond to maximum or minimum opening dimensions compared to a predetermined opening dimension.

The Office Action takes the position that since Kanda discloses forming resist patterns without fish eyes or striations, Kanda discloses that the average opening dimension is greater than 90 % of the predetermined dimension and that the maximum and minimum opening dimensions are within a range of ± 3 % of the predetermined opening dimension. (Office Action, pages 2-3 citing Kanda, paragraphs 31-37 and Table 1.) However, the fish eye and striation defects referred to in Kanda, refer to “coating defects” of the coating film and not to resist pattern defects. (Paragraphs 33-35.) Specifically, Kanda states that in Table 1, “O” refers to the following evaluation: “unevenness on the coating, such as fish eyes and striations, is not observed and uniform coating film is formed.” (Paragraph 35.)

Thus, Kanda does not disclose the elements as recited in claim 1.

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Double-Patenting Rejection

Claims 1-19 were provisionally rejected under judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-21 of copending Application No. 10/290,493.

Applicants will address the provisional double patenting rejection once all other rejections have been withdrawn.

For at least the foregoing reasons, claim 1 is patentable over the cited reference, and claims 3 and 5-19 are patentable by virtue of their dependence from claim 1. Accordingly, withdrawal of the rejection of claims 1, 3 and 5-19 is hereby solicited.

In view of the above remarks, Applicants submit that that the claims are in condition for allowance. Applicants request such action at an early date.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

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If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,
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